

Milk, Melons, Mariscos, Moorings, Maquilas and Megawatts . . . and Biodiesel A Tour of Southern Honduras

A February 2008 report from the U.S. Embassy Tegucigalpa, Honduras

Summary: *Southern Honduras is a study of contrasts. The region houses some of the country's most important energy infrastructure and its only Pacific port. But its traditional ranching economy is depressed, causing much of the working-age population to seek fortunes elsewhere. New export industries are emerging, however, and construction has begun on an export-processing industrial park. Meanwhile, some enterprising academic/entrepreneurs are hoping to squeeze energy and profit out of a desert weed.*

Honduras's Arid South

The southernmost finger of Honduras, comprising the departments of Choluteca and Valle, is dry, hot, and dusty. Some locals call it *Cholutexas*. It is traditionally a cattle ranching and sugar-producing area. But pastureland is not very productive, and many young males from the region have migrated to the United States. More recently, crops like melons (mostly cantaloupes and watermelons) and okra are being produced for export, mostly to the United States. Because of the exodus of young male workers, farms rely heavily on female and teenage labor (Honduran labor codes allow employment of youths as young as 14, subject to parental permission and certain restrictions on work hours and conditions). Shrimp farming has been established in coastal areas in recent decades and represents another major export industry.

Gateway to the Pacific

San Lorenzo (in Valle Department) houses Honduras's only Pacific port. It has a single pier and can accommodate only two ships at a time. It mostly offloads liquid fuels and Japanese and Korean cars and exports molasses. There are no cranes for offloading containers. Its channel is narrow and cannot accommodate ships with drafts exceeding 9.5 meters. The road leading to the port is heavily potholed. Local businesses complain that the port fees are excessive. As a result, most of the region's exports go either through the Atlantic port of Puerto Cortes or through Pacific ports in El Salvador. To ameliorate the situation, locals say the Honduran government should either expand and improve the port at San Lorenzo or reactivate the deepwater port at Amapala, on Isla del Tigre, 25 kilometers to the southwest. However, since Isla del Tigre is not connected to the mainland, cargo arriving at Amapala would have to be shuttled to the mainland by boat, or a causeway capable of carrying heavy truck traffic would have to be built.

Keeping the Country's Lights on

The San Lorenzo Power and Light (*Lufussa*) facilities near San Lorenzo produce 30 percent of Honduras's electricity. *Lufussa* comprises three complexes – Pavana I, II, and III – built between 1994 and 2004, plus a nearby fuel import terminal with capacity to store about seven weeks of fuel. Total generation capacity is about 400 MW, including 40 MW from a diesel turbine – basically a converted jet engine – that is kept in reserve for times of peak demand. The mainload comes from two complexes of Finnish-designed piston engines burning heavy fuel oil. All could be converted to run on natural gas, if economical supplies could be found. They could also burn biodiesel.

And its Vehicles Moving

The Petrosur fuel storage terminal near San Lorenzo is operated as a 50/50 joint venture between the U.S. firm Esso and the Honduran company DIPPSA. The terminal, which began operating in 1993, dispatches about 7,000 barrels of fuel a day, including automotive fuel, jet fuel, and kerosene. There is also a small LPG sphere nearby owned and operated by the French firm ELF/Total.

Melon Farming

Melon farming for export has become a major part of the Southern Honduran economy. One typical operation, *Montelibano*, produces cantaloupes on nine fields throughout the region, totaling 2,100 hectares. It employs 3,000 peoples during the peak season from October to April and 1,000 the rest of the year. In the off season, the company plants white corn for the domestic market, which helps to replenish the soil and produce compost, in addition to a second revenue stream. Eighty percent of the melons are exported to the United States and the rest to Europe. The melons are sorted, treated and custom-packaged for various supermarket chains.

Montelibano uses a considerable amount of U.S. irrigation equipment, fertilizer, and other inputs and replaces two to three John Deere tractors each year. Plastic sheeting is imported from Mexico, and growth medium in the nurseries comes from Canada. The company's manager said productivity could be improved significantly with better equipment and training for technical personnel. But with Honduran banks charging 13-14 percent interest for short-term loans, the investments are not being undertaken.

Shrimp Farming

San Lorenzo Sea Farms raises shrimp in 7,000 hectares of lagoons surrounded by coastal mangrove swamps. The company opened in 1973 and is five-percent owned by the World Bank's International Finance Corporation. It produces about 30 percent of Honduras's shrimp for export. IFC requires the company to adhere to best practices for

ecological protection. The bulk of exports – 40 percent – go to Europe, where the market is more lucrative; 20 percent go to the United States; most of the rest to Mexico. The company has received inquiries from Asia but has no significant customers there yet.

Dairy Farmers Struggling

Raising cattle for milk was once a mainstay of Choluteca's economy. But the industry is in decline because of low prices and productivity. One group of 24 small Choluteca dairy farmers, with support from one of Honduras's major dairy distributors, recently got together to establish a milk collection center through which they have been able to market their product to urban markets for a higher price, in exchange for meeting stricter quality standards. Before establishing the center, they sold their milk to local artisanal cheese and cream producers, as most regional ranchers do.

Productivity of regional dairy farms is generally low because of dry conditions and lack of irrigation. Most dairy farmers use Brahma cattle, which survive well in hot dry climates but are not great milk producers. Dairy farmers are also having trouble competing for labor with the melon, okra, and sugar cane operations that are expanding in the region. They do not have good access to credit for investing in milking machines, irrigation, or other improvements. The paltry quantities of milk farmers were bringing to the collection center in pickup trucks did not appear sufficient even to cover the cost of the gasoline to get it there.

But Biodiesel Could Take Off

Agroipsa, an experimental farm on the outskirts of Choluteca, is growing *jatropha curcas* (aka Barbados nut or Physic nut), which it hopes to use to produce biodiesel. The company expects to sell its first batch of oil in September or October – at prices that it says will be extremely competitive with the corn and soybean currently being used to make biodiesel at plants in the United States. *Agroipsa* claims vehicles can run on 100% *jatropha* oil with only minor modifications, and it expects to be powering its own trucks and tractors on the fuel by next spring. Blended with 10% methanol, it could be put into any diesel engine and even be used to run the power plants at San Lorenzo that are currently using heavy fuel oil. Compared to African palm oil, which is being grown for possible biodiesel production in Northern Honduras, *jatropha* oil works better in cold climates, and the trees last longer – 35 years compared with 15 for African palm. The company expects each hectare planted in *jatropha* to yield 1,100-1,200 liters of oil and employ 1.5 people year-round.

Agroipsa says it can produce biodiesel for the Honduran market at 48 Lempiras (US\$2.54) per gallon, well below the current pump price in Honduras of 60 Lempiras. A biofuels law passed by the Honduran Congress last year exempts such fuels from taxes for the next 15 years. If the project is successful, the company envisions getting local

farmers to produce jatropha on small plots or interspersed with food crops. It grows well in the semi-arid conditions and sandy soils around Choluteca.

Building for a (Hopeful) Future

Just north of Choluteca City, real estate developer *Grupo W* is building an industrial park to draw some of the export processing (*maquila*) activity clustered around San Pedro Sula, in Northern Honduras, to the south. The first factory has already been leased by *Grupo Lovable* and expects to begin operating in May, employing 1,000 workers making T-shirts. If all goes according to plan, the so-called Honduras Pacific Free Zone will eventually comprise 172 acres of industrial space, 78 acres of commercial space, and a 220-acre residential area with 2,500 homes that workers will be able to obtain on concessional terms.

Local business contacts said the new industrial park was resisted by many in the community, who feared it would attract the crime and vice for which San Pedro Sula is now infamous. That the project is moving forward is testament, according to these business contacts, that Cholutecans are coming to realize they cannot live by milk, sugar, and melons alone. They must generate new sources of wealth and employment to keep young people from leaving the area.